

Appendix 2.

Ecological Reference Worksheet

Author(s) / participant(s): Don Ashby Jr., Bob Moorhead, Richard Spencer, Tim Henry, Ty Carter, John Hartung

Contact for lead author : Don Ashby Jr. **Reference site used? Yes/No** No

Date: 3/8/2005 **MLRA:** 70 **Ecological Site:** Bottomland CP-3 This must be verified based on soils and climate (see Ecological Site Description). Current plant community cannot be used to identify the ecological site.

Indicators: For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above and below average years for <u>each</u> community within the reference state, when appropriate & (3) site data. Continue description on separate sheet.	Indicator Weight
1. Number and extent of rills : None	
2. Presence of water flow patterns: This site occurs in a position which receives surface runoff from surrounding uplands. Water flow patterns may be present but should be minor and have minimal impact to this site.	
3. Number and height of erosional pedestals or terracettes: None	
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground) : Bare ground will be present up to 20% Bare patches should be small and sporadically connected.	
5. Number of gullies and erosion associated with gullies: This site occurs in a position which receives surface runoff from surrounding uplands. Gullies and erosion associated with gullies may be present but should be minor and have minimal impact to this site.	
6. Extent of wind scoured, blowouts and/or depositional areas: None	
7. Amount of litter movement (describe size and distance expected to travel) : Fine to medium (plant material) litter movement 1-3 feet can be expected with accumulations along the edges of the bottomlands. Extreme flooding occurrences can accumulate litter from upland sites.	
8. Soil surface (top few mm) resistance to erosion (stability) values are averages - most sites will show a range of values for both plant canopy and interspaces, if different): Anticipated to be 4-5 at the surface and subsurface in the interspaces and 5-6 at the surface and subsurfaces under vegetation.	
9. Soil surface structures and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different) : Soils are loams, silt loams, and silty clay loams, dark brown in color with the A horizon up to 12 inches in depth. Soils are deep and well drained with slow to moderately slow permeability.	
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Grass and forbs account for 80% of the annual herbaceous production for this site and make up 40% of the site composition. The available water-holding capacity is high, with this site receiving surface runoff from uplands, on a regular basis.	
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None. Overgrazing on these sites may be mistaken for compaction.	
12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: indicate much greater than (>>), greater than (>), and equal to (=) : Warm Season bunch grasses=Cool Season rhizome grass>>Warm Season rhizome grasses>Shrubs(Fourwing saltbush, cholla)>Forbs(Coneflower, Globemallow, Thistle, Desert Holly)	
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence) : Most of the perennial grasses, forbs, and shrubs are long lived. Extended drought periods tend to cause high mortality rates in the grass species, with some mortality with the forbs. Shrub mortality can occur in severe, multiple year droughts.	
14. Average percent litter cover (40 %) and depth (1.2 inches). Percent litter and depth will increase with multiple, above average rainfall years.	
15. Expected annual production (this is <u>TOTAL</u> above-ground production, not just forage production): 1800 lbs/ac low precip years, 2900 lbs/ac in average precip years, 4000 lbs/ac in above average years. Grass/Grasslikes make up 73% of the total annual production.	
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do , continue to increase regardless of the management of the site and may eventually dominate the site": Cholla species can become invasive when extended periods of drought occur and along the edges of the bottomlands.	
17. Perennial plant reproductive capability : Weather related and natural disease can result in reduced reproductive capabilities. Typically this site receives additional runoff from adjacent uplands which makes the vegetation noticeably taller and more dense.	

Photograph (s)

MLRA : 70

Date :

Ecological Site : Bottomland CP-3

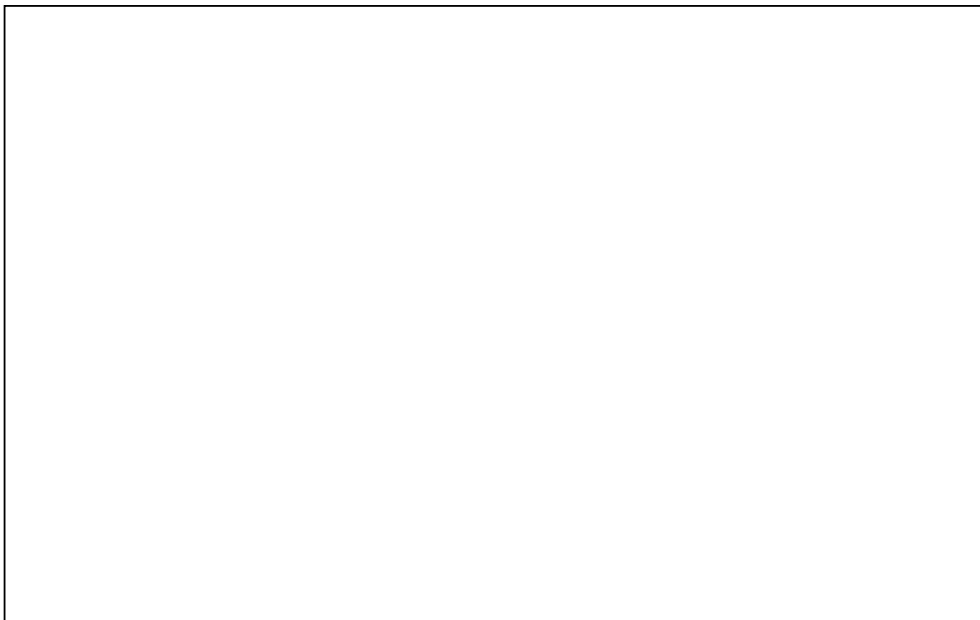


Photo # 1

Comments :

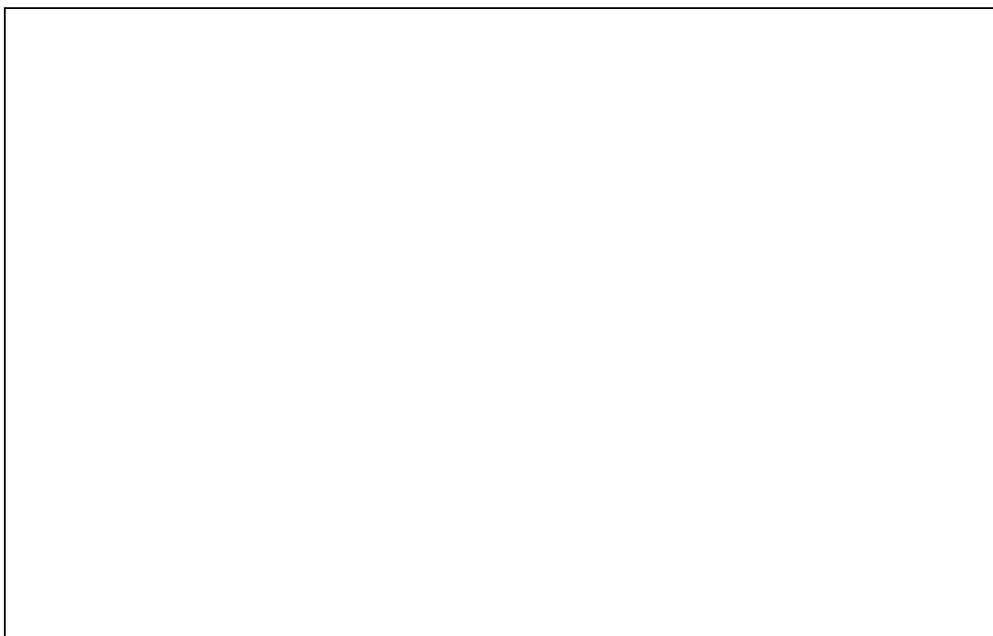


Photo # 2

Comments :

Appendix 4.

Functional / Structural Groups Worksheet

State	NM	Office	Ecological Site	Bottomland CP-3
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Observers	Don Ashby Jr., Bob Moorhead, Richard Spencer, Tim Henry, Ty Ca	Date	3/8/05
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Indicate whether each "structural/functional group" is a Dominant (D)(roughly 40-100% composition), a**Sub-dominant (S)** (roughly 10-40%) composition) a**Minor Component (M)** (roughly 2-5% composition), or a**Trace Component (T)** (<2% composition) based on weight or cover composition in the area of interest (e.g., "Actual ² column) relative to the "Potential ² column derived from information found in the ecological site/description and/or at the ecological reference area.

Biological Crust 3 dominance is evaluated solely **oncover** not composition by weight